

AMENDMENTS TO THE CLAIMS

Please amend claims 1 and 17 as set forth in the following listing of claims, which will replace all prior versions, and listings, of claims in the present application.

Listing of Claims

1. (CURRENTLY AMENDED) A fuel cell, comprising:
 - a pair of separators;
 - a membrane electrode assembly including an electrolyte membrane and an anode and a cathode disposed at both sides of said electrolyte membrane, said membrane electrode assembly being held by said pair of separators ;
 - a sealing member disposed between said membrane electrode assembly and a first of said pair of separators, said sealing member including a circumferential portion surrounding at least a portion of the circumference of the first separator, and an extended portion seamlessly connected to and extending from the circumferential portion to an end portion of the extended portion over a surface of the separator; and
 - a reactant gas channel disposed between said membrane electrode assembly and said first separator, wherein the gas channel bends around the end portion of the extended portion of the sealing member, said extended portion extending along a significant portion of said gas channel in order to direct the flow of a fluid flowing therealong.
2. (Original) A fuel cell according to claim 1, wherein said pair of separators is formed from a metal thin plate.
3. (Original) A fuel cell according to claim 1, wherein said reactant gas channel has a turning portion, and a boundary portion of said turning portion is constituted by at least a part of said sealing member.
4. (Original) A fuel cell according to claim 2, wherein said reactant gas channel has a turning portion, and a boundary portion of said turning portion is constituted by at least a part of said sealing member.

5. (Previously Presented) A fuel cell according to claim 1, wherein said reactant gas channel has a turning portion and a linear portion, and said sealing member extends to said linear portion.

6. (Previously Presented) A fuel cell according to claim 1, wherein said sealing member has an extended portion, and a protruding member is provided in parallel with said extended portion so that a part of said reactant gas channel is formed between said extended portion and said protruding member.

7. (Previously Presented) A fuel cell according to claim 1, wherein said gas channel includes a plurality of surface features, and wherein said extended portion of said sealing member extends between adjacent surface features.

8. (Previously Presented) A fuel cell according to claim 1, wherein said extended portion of said sealing member forms a boundary portion for directing flow of the fluid along a significant portion of the reactant gas channel.

9. (Previously Presented) A fuel cell according to claim 8, wherein said extended portion of said sealing member when extending along said reactant gas channel operates as a boundary portion in order to form a U-shaped gas channel for directing the fluid therealong.

10. (Previously Presented) A fuel cell according to claim 9, further comprising a plurality of extended portions to form a plurality of U-shaped gas channels.

11. (Previously Presented) A fuel cell according to claim 1, wherein said gas channel comprises a plurality of passage units spaced apart from each other, wherein each of said plurality of passage units includes a plurality of surface features.

12. (Previously Presented) A fuel cell according to claim 11, wherein said extended portion of said sealing member extends between a pair of said plurality of passage units.

13. (Previously Presented) A fuel cell according to claim 1, wherein said reactant gas channel comprises a plurality of grooves.

14. (Previously Presented) A fuel cell according to claim 13, wherein said extended portion of said sealing member extends between adjacent grooves.

15. (Previously Presented) A fuel cell according to claim 1, wherein said reactant gas channel comprises a plurality of protrusions.

16. (Previously Presented) A fuel cell according to claim 15, wherein said extended portion of said sealing member extends between adjacent protrusions.

17. (CURRENTLY AMENDED) A fuel cell, comprising:

a pair of separators;

a membrane electrode assembly including an electrolyte membrane and an anode and a cathode disposed at both sides of said electrolyte membrane, said membrane electrode assembly being held by said pair of separators ;

a sealing member disposed between said membrane electrode assembly and a first separator of said pair of separators, said sealing member including a circumferential portion surrounding a circumference of a first separator of said pair of separators and an extended portion extending seamlessly from said circumferential portion in a longitudinal direction to an end portion of the extended portion; and

a reactant gas channel disposed between said membrane electrode assembly and said first separator, wherein the gas channel bends around the end portion of the extended portion of the sealing member and the extended portion of the sealing member extends between a first surface feature on said first separator and a second surface feature on said first separator to form a part of said reactant gas channel.

18. (Previously Presented) The fuel cell of claim 17, wherein the extended portion separates a first linear portion of the reactant gas channel from a second linear portion of the reactant gas channel.

19. (Previously Presented) The fuel cell of claim 18, wherein a connecting path for connecting the first linear portion and the second linear portion is formed between an end of the extended portion and the circumferential portion of the sealing member.

20. (Previously Presented) The fuel cell of claim 17, wherein the first surface feature and the second surface feature each comprise a groove.

21. (Previously Presented) The fuel cell of claim 17, wherein the first surface feature and the second surface feature each comprise a protruding member.